

NEW AND LITTLE KNOWN SPECIES OF TEGENARIA
(Araneida: Agelenidae)

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Three new species of *Tegenaria* have been found in the Pacific Northwest and are described in this paper. Two other species, *Tegenaria nana* Simon and *Tegenaria californica* Banks, are included because they are quite common in the Northwest, and because their original descriptions included no figures. The most common *Tegenaria* represented in this locality is the cosmopolitan species *Tegenaria derhami* (Scop.), a description of which is omitted because it is adequately described and figured elsewhere (Emerton: Common Spiders, 1902, p. 96; *ibid*: New Eng. Spiders, Trans. Conn. Acad., Vol. VIII, 1889, p. 29, f. 6.).

Notes of appreciation are expressed to Miss Elizabeth B. Bryant of the Museum of Comparative Zoölogy for identifying specimens of *Tegenaria*, and to Drs. Melville H. Hatch and Robert C. Miller of the University of Washington for their help and inspiration, and especially to Professor Trevor Kincaid for the loan of his collection of spiders.

***Tegenaria gigantea* Chamberlin and Ivie (Fig. 3)**

Tegenaria gigantea Chamberlin and Ivie, 1935, Bull. Univ. Utah, vol. 26, p. 31, pl. XIII, f. 106.

MALE: Length 15 mm., with extremely long, slender and hairy legs. Cephalothorax reddish yellow, becoming quite reddish on cephalic part and almost black around and in front of the eyes. The cephalic part is rounded, highest in the center, the sides are almost parallel, and the entire cephalic region is raised and sharply separated from the thoracic part which is rather flat and almost circular in outline. The chelicerae and mouthparts are almost black, somewhat geniculate, with prominent yellow condyles. The eyes

are about equal in size, although the posterior eyes are not quite so large as the anterior eyes, the posterior eyes in a slightly procurved row, well and equally separated; anterior eyes in an almost straight row (from a dorsal view) and closer together. Anterior median eyes the radius of one of them apart, and not quite so far from the anterior lateral eyes. Legs tannish yellow except femora of first pair which are brown; the first leg measures 4.5 cm. The abdomen is slender, and yellow with many dark gray markings; the area in the anterior median region is unmarked. The hind spinnerets are long, with the apical segments a little longer than the basal segment. The palpus is slender with the cymbium well clothed with long hairs. The tibia of the palpus is slightly swollen distally and has two large tooth-shaped apophyses extending latero-anteriorly on the lateral side. The embolus of the bulb is slender and arises from the inner distal margin, curving laterally to end in a projecting conductor in the lateral posterior region.

Male, collected at Nanaimo, B. C. by Professor Kincaid, Sept. 8, 1934. (Exline Coll.)

This species nearest *Tegenaria derhami* Scop. from which it is separated by its much greater length and by the structure of the bulb of the palpus.

***Tegenaria quadrata* n. sp. (Fig. 4)**

FEMALE: Length 5.6 mm. Cephalothorax brownish yellow with a few irregular gray marks including a narrow marginal line, and a row of spots between this and the median furrow opposite the legs, and a large median gray area. Chelicerae and legs same color as the cephalothorax, legs banded with gray. Eyes large and quite widely separated; posterior eyes in a straight row equally spaced and equal in size; anterior median eyes smaller than other eyes separated by a distance once and a half as great as their diameter, nearer the anterior lateral eyes; thus the rectangle formed by the median eyes is large and perfect, longer than wide. Abdomen globose with a gray-white background and many darker gray markings. The apical segment of the hind spinnerets is a little shorter than the basal segment. The area of the epigynum is raised and heavily

chitinized; on the anterior margin is a small depression which obviously bears pores leading into the spermathecal ducts; these ducts are indistinctly seen through the chitin extending from the depression almost to the genital furrow in the midline. The spermathecae can be indistinctly seen in the anterior lateral parts of the epigynum.

HOLOTYPE: Female, collected at Seattle, Wash., by Professor Kincaid. (Exline Coll.)

Closest to *Tegenaria californica* Banks, but separated by the much greater distance between the anterior median eyes, and the large chitinized area of the epigynum which is negligible in *T. californica*.

***Tegenaria magnacava* n. sp. (Fig. 5)**

FEMALE: Length 11 mm. Cephalothorax light reddish yellow with grayish streaks on the sides, cephalic part only a little darker than the thoracic; cephalothorax moderately rounded with no great demarcation between cephalic part and thoracic. Chelicerae quite geniculate in front, red in color. Legs well clothed with hair, moderately long and tannish or reddish yellow. Eyes of equal size, those of posterior row somewhat procurved, widely and equally spaced. Eyes of anterior row almost equally spaced, but slightly nearer each other than those of posterior row. Abdomen with a light yellowish gray background and mottled and checked with dark gray markings. Epigynum large surrounded by a thick posterior fold of chitin and an anterior semicircular fold; the cavity formed by these is large and deep. See fig.

HOLOTYPE: Female, collected at Seattle, Wash., Nov. 20, 1930. (Exline Coll.)

Similar in size and physical structure to *Tegenaria derhami* Scop. The epigynum is entirely different in form from that of any other species, consisting of a large cavity surrounded by chitinous folds.

***Tegenaria nana* Simon (Fig. 1)**

Tegenaria nana Simon 1897, Annal. Soc. Entom. Belgique, Vol. XLI, p. 17.

FEMALE: Length, 4.0-5.5 mm. Cephalothorax tannish

yellow with three indefinite gray spots on each side of the thorax, a marginal gray band and a few gray lines on the head part; cephalothorax rather roundly arched. Chelicerae not at all geniculate. Eyes large in proportion to size of spider; posterior eyes in nearly straight row, almost equally distant (less than a diameter of one of the eyes) and equal in size; eyes of anterior row very close together and median eyes considerably smaller than the lateral eyes. Legs yellow in some specimens, orange or tan ringed with gray in other specimens. Abdomen globose, pale grayish yellow with many dark gray markings especially in the posterior half; these markings form a row of double concave arches down the center of the back posteriorly. Apical segment of hind spinnerets is slightly shorter than the basal segment. The epigynum is raised, rounded off imperceptibly into the venter; in its center is a heart-shaped dark reddish brown chitinized area, which shows two slight impressions; these are the openings to the ducts leading to the spermathecae; posterior to this area is a slender median dark band running to the epigastric furrow; this dark band is caused by the ducts which lead into the spermathecae, which in a few specimens are slightly visible as round balls underneath the chitin.

MALE: Length, 4.0-4.5 mm. Cephalothorax very evenly rounded with cephalic grooves very shallow, yellow in color with very slight gray markings. Chelicerae, and relationships between the eyes as in female; legs about the same except that they are more solidly one color, yellow, or orange brown. Abdomen slender, white background with dark gray markings numerous in the posterior part, very much as in the female. Hind spinnerets with apical segment a little shorter than basal segment. Tibia of male palpus with two basal teeth, black in color on the lateral margins, then a deep horizontal groove which ends in the middle of the segment with a rather large black, flat projection directed anteriorly; on the distal margin of the tibia it bears another lateral projection pointing anteriorly. The cymbium of the palpus is deeply rounded in its body part but anteriorly slenderizes suddenly and has a narrow, short tip.

HYPOTYPES: Male specimens, collected March 24, 1932, and Oct. 1, 1932, Olympia, Washington (Exline Coll.).

Female specimens from Seattle, Olympia, and Beaver Creek, Oregon.

***Tegenaria californica* Banks (Fig. 2)**

Tegenaria californica Banks¹ 1896 Journ. Ent. News, Vol. 4, p. 90.

FEMALE: Length 7-9 mm. Cephalothorax orange marked with black lines and spots; legs long, hairy, ringed with dark gray. Posterior eyes in straight row, almost equidistant, laterals slightly larger than the medians; anterior eyes with medians smaller than laterals and further apart than from laterals. Abdomen large, globose, gray with light spots; posterior spinnerets with hind segment slightly shorter than basal segment. The area of the epigynum is decidedly convex, with a small shallow atrium in the center, in which two very small spots mark the opening of the spermathecal duct; the spermathecae show slightly through the chitin in the anterior lateral margins; a dark ridge of chitin extends posteriorly from the center of the posterior margin of the atrium to the epigastric furrow.

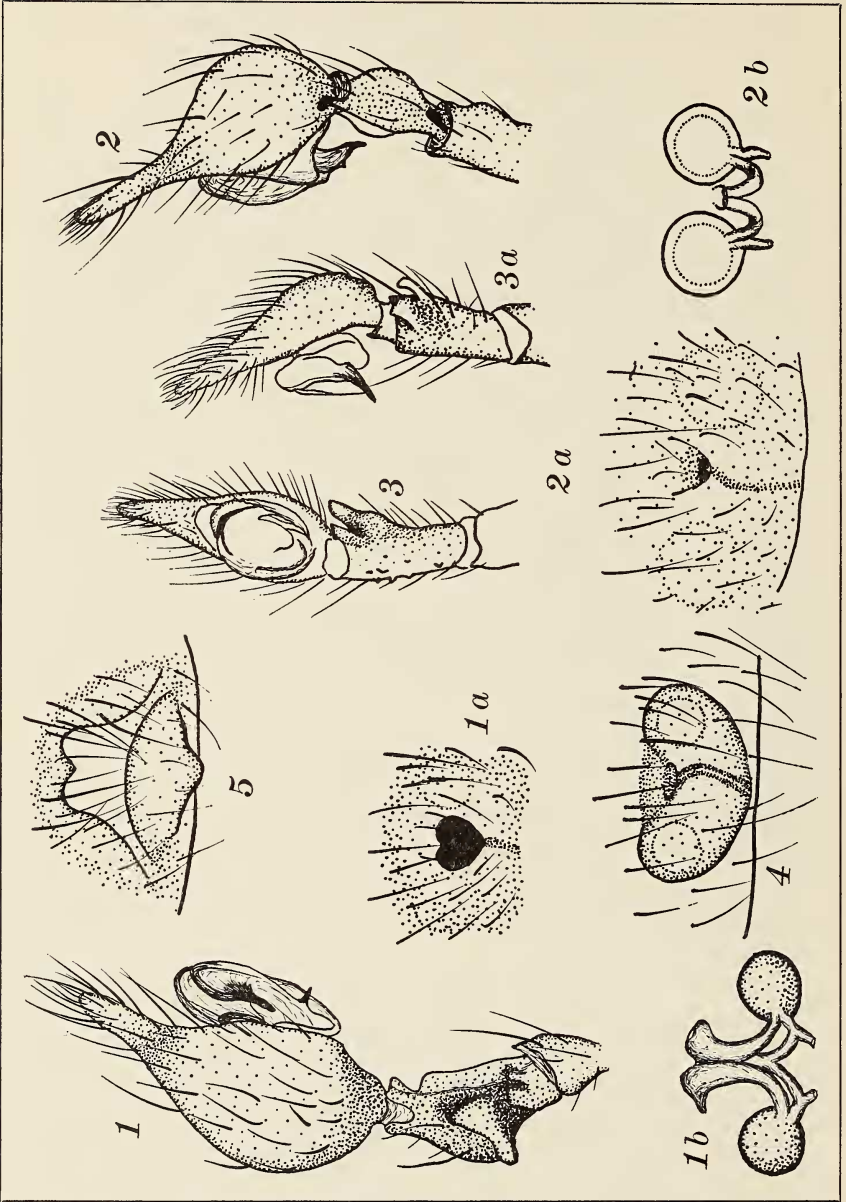
MALE: Length 5-6.5 mm. Eyes all equal in size, eyes of posterior row and anterior row all equidistant. Tibia of palpus with a basal, almost horizontal, apophysis and a distal pointed apophysis on the lateral margin; embolus almost encircling bulb.

Distribution in Washington: Western part of state. Specimens from Stillaquamish River (Snohomish Co.); Lebar, Olympia Mts.; Fort Canby (Pacific Co.); Everett; Seattle; and Olympia (in Exline Coll.).

¹Identifications of this and above species kindly made by Miss Elizabeth B. Bryant of the Museum of Comparative Zoölogy, Harvard University.

EXPLANATION OF PLATE 1.

- Figure 1, 1a, 1b. *Tegenaria nana* Simon. (1, palpus of male, $\times 29$; 1a, epigynum of female; 1b, epigynum of female dissected out from a NaOH solution) $\times 63$.
- Figure 2, 2a, 2b. *Tegenaria californica* Banks. (As above.)
- Figure 3, 3a. *Tegenaria gigantea* Chamberlin and Ivie. (3, ventral view of palpus; 3a, lateral view of palpus) $\times 13$.
- Figure 4. *Tegenaria quadrata* n. sp. (Epigynum of female) $\times 63$.
- Figure 5. *Tegenaria magnacava* n. sp. (Epigynum of female) $\times 63$.



Exline — Species of *Tegenaria*.